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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,011	07/07/2003	Masahiko Hosokawa	392.1803	4508

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
SHECHTMAN, SEAN P	
ART UNIT	**PAPER NUMBER**
2125	

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,011	HOSOKAWA ET AL.	
	Examiner	Art Unit	
	Sean P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-12 are presented for examination. Claims 1-4, 7, and 8 have been amended. Claims 9-12 have been added.

Specification

2. Objections withdrawn due to the amendment.

Claim Objections

3. Objections withdrawn due to the amendment.

Claim Rejections - 35 USC § 112

4. Rejections withdrawn due to the amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,298,006 to Miyajima.

Referring to claim 9, Miyajima teaches a numerical controller for controlling a machine according to a machining program (Abstract), comprising: a storage device for storing input/output units (Fig. 3, element 100; Col. 4, lines 45-50) each of the input/output units including program data (Fig. 3, elements P3-P5, programs 101, 102...), said program data is obtained by dividing the machining program (See Fig. 3); each of the input/output units including additional information associated with the program data (Fig. 3, elements P3-P5, start

commands beginning with U and end commands beginning with V); said additional information including first input/output unit data designating an input/output immediately preceding each input/output unit in a sequence of the machining program (Fig. 3, elements P3-P5, start commands beginning with U) and second input/output unit data designating an input/output unit following each input/output unit (Fig. 3, elements P3-P5, start commands beginning with U and end commands beginning with V) in the sequence of the machining program (Col. 3, line 66 – Col. 4, line 9); a processor for processing the input/output units (Col. 2, lines 48-56).

6. Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,578,913 to Yasuda.

Referring to claim 9, Yasuda teaches a numerical controller for controlling a machine according to a machining program (Abstract), comprising: a storage device for storing input/output units each of the input/output units including program data (Col. 13, lines 28-37), said program data is obtained by dividing the machining program (Col. 13, lines 24-27); each of the input/output units including additional information associated with the program data; said additional information including first input/output unit data designating an input/output immediately preceding each input/output unit in a sequence of the machining program and second input/output unit data designating an input/output unit following each input/output unit in the sequence of the machining program (Col. 13, lines 28-45; Col. 12, lines 34-58); a processor for processing the input/output units (Col. 4, lines 30-53).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,298,006 to Miyajima in view of U.S. Pat. No. 6,088,624 to Khan or U.S. Pat. No. 5,640,559 to Silberbauer.

Referring to claim 1, Miyajima teaches a numerical controller for controlling a machine according to a machining program (Abstract), comprising: a storage device or medium for storing input/output units (Fig. 3, element 100; Col. 4, lines 45-50) each including program block data (Fig. 3, elements P3-P5, programs 101, 102...) and additional information associated with the program block data (Fig. 3, elements P3-P5, start commands beginning with U and end commands beginning with V); said program block data is obtained by dividing the machining program (See Fig. 3); said additional information including front input/output unit data designating an input/output unit immediately preceding each input/output unit in a sequence of the machining program (Fig. 3, elements P3-P5, start commands beginning with U) and rear input/output unit data designating an input/output unit following each input/output unit (Fig. 3, elements P3-P5, start commands beginning with U and end commands beginning with V) in a sequence of the machining program (Col. 3, line 66 – Col. 4, line 9); a processor for processing the input/output units (Col. 2, lines 48-56); and an interface for inputting/outputting the input/output units between said storage device or medium and said processor (Col. 2, line 57-Col. 3, line 45).

Referring to claim 2, Miyajima teaches the controller above, wherein said processor reads a first input/output unit including a program block corresponding to a beginning part of the

machining program and successively reads input/output units stored in said storage device or medium according to rear input/output unit data in the previously read input/output unit through said interface, and wherein said processor successively executes the program blocks included in the read input/output units (Col. 6, lines 34-50).

Miyajima fails to teach that said additional information including an effective data length of the program block.

Examiner notes that independent claim 1 does not require that the effective data length be functionally used with respect to any other part of the claim.

However, referring to claim 1, Khan teaches analogous art (Col. 1, lines 18-57 of '624), wherein identifying data structures or its elements within a control program (Col. 2, lines 16-53 of '624) includes software that denotes the size of data of the data elements (Col. 8, lines 1-7 of '624).

However, referring to claim 1, Silberbauer teaches analogous art (Abstract of '559), wherein a system and method of encoding units of data (Title of '559) read from data storage (Col. 50, lines 43-54 of '559) includes encoding a length of the unit of data into a length field of a prefix for the data unit (Col. 50, lines 59-65; Col. 51, lines 1-2 of '559).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Khan or Silberbauer with the teachings of Miyajima.

One of ordinary skill in the art would have been motivated to combine these references because Khan teaches a method of coordinating memory assigned to both input/output devices of

an industrial controller and variables of a control program (Col. 1, lines 13-17 of '624). Furthermore, Khan teaches the ability to adopt arbitrary data structures appropriate to a device, having arbitrary size and divided into arbitrary data types, wherein the invention allows selecting data structures for exchanging data with a centralized I/O table memory to identify data structures or elements within the control program (Col. 2, lines 17-53 of '624).

One of ordinary skill in the art would have been motivated to combine these references because Silberbauer teaches systems and methods for encoding, decoding, moving, and manipulating computerized data particularly relating to entities and relationships (Col. 1, lines 15-18 of '559). Furthermore, Silberbauer efficient ways to encode E/R data which can be transmitted between a programmable workstation and another computer (Col. 1, lines 22-46 of '559).

8. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,578,913 to Yasuda in view of U.S. Pat. No. 6,088,624 to Khan or U.S. Pat. No. 5,640,559 to Silberbauer.

Referring to claim 1, Yasuda teaches a numerical controller for controlling a machine according to a machining program (Abstract), comprising:

a storage device or medium for storing input/output units each including program block data and additional information associated with the program block data (Col. 13, lines 28-37); said program block data is obtained by dividing the machining program (Col. 13, lines 24-27); said additional information including front input/output unit data designating an input/output unit immediately preceding each input/output unit in a sequence of the machining program (Col. 13,

lines 28-37) and rear input/output unit data designating an input/output unit following each input/output unit (Col. 13, lines 28-37) in a sequence of the machining program (Col. 13, lines 43-45); a processor for processing the input/output units; and an interface for inputting/outputting the input/output units between said storage device or medium and said processor (Col. 4, lines 30-53).

Referring to claim 2, Yasuda teaches the controller above, wherein said processor reads a first input/output unit including a program block corresponding to a beginning part of the machining program and successively reads input/output units stored in said storage device or medium according to rear input/output unit data in the previously read input/output unit through said interface, and wherein said processor successively executes the program blocks included in the read input/output units (Abstract; Col. 15, line 47 – Col. 16, line 2).

Yasuda fails to teach that said additional information including an effective data length of the program block.

Examiner notes that independent claim 1 does not require that the effective data length be functionally used with respect to any other part of the claim.

However, referring to claim 1, Khan teaches analogous art (Col. 1, lines 18-57 of '624), wherein identifying data structures or its elements within a control program (Col. 2, lines 16-53 of '624) includes software that denotes the size of data of the data elements (Col. 8, lines 1-7 of '624).

However, referring to claim 1, Silberbauer teaches analogous art (Abstract of '559), wherein a system and method of encoding units of data (Title of '559) read from data storage

(Col. 50, lines 43-54 of '559) includes encoding a length of the unit of data into a length field of a prefix for the data unit (Col. 50, lines 59-65; Col. 51, lines 1-2 of '559).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Khan or Silberbauer with the teachings of Yasuda.

One of ordinary skill in the art would have been motivated to combine these references because Khan teaches a method of coordinating memory assigned to both input/output devices of an industrial controller and variables of a control program (Col. 1, lines 13-17 of '624). Furthermore, Khan teaches the ability to adopt arbitrary data structures appropriate to a device, having arbitrary size and divided into arbitrary data types, wherein the invention allows selecting data structures for exchanging data with a centralized I/O table memory to identify data structures or elements within the control program (Col. 2, lines 17-53 of '624).

One of ordinary skill in the art would have been motivated to combine these references because Silberbauer teaches systems and methods for encoding, decoding, moving, and manipulating computerized data particularly relating to entities and relationships (Col. 1, lines 15-18 of '559). Furthermore, Silberbauer efficient ways to encode E/R data which can be transmitted between a programmable workstation and another computer (Col. 1, lines 22-46 of '559).

9. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,578,913 to Yasuda or U.S. Pat. No. 5,298,006 to Miyajima in view of U.S. Pat. No. 6,088,624 to Khan or U.S. Pat. No. 5,640,559 to Silberbauer, as applied to claims 1-2 above, and further in

view of U.S. Pat. No. 5,258,905 to Yamauchi. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,578,913 to Yasuda or U.S. Pat. No. 5,298,006 to Miyajima, as applied to claim 9 above, and further in view of U.S. Pat. No. 5,258,905 to Yamauchi.

Referring to claims 3, 4, and 10, Yasuda, Miyajima, Khan and Silberbauer teach all the limitations set forth above, however, fail to teach a branch instruction is included in the program block of an input/output unit when it is executed by said processor, said processor reads input/output units preceding the input/output unit being executed using the front input/output unit data and reads input/output units following the input/output unit being executed using the rear input/output unit data to search a line designated by the branch instruction, wherein data specifying an input/output unit including a line designated by a branch instruction, and when the branch instruction is included in the program block of the input/output unit in execution said processor reads the input/output unit specified by the data.

However, referring to claims 3 and 10, Yamauchi teaches analogous art, wherein when a branch instruction is included in the program block of an input/output unit when it is executed by said processor, a processor reads input/output units preceding the input/output unit in execution using the front input/output unit data and reads input/output units following the input/output unit in execution using the rear input/output unit data to search a line designated by the branch instruction (Col. 6, lines 39-58 of '905). Referring to claim 4, Yamauchi teaches information further includes data specifying an input/output unit including a line designated by a branch instruction, and when the branch instruction is included in the program block of the input/output

unit in execution said processor reads the input/output unit specified by the data (Fig. 2b and Fig. 6; Col. 6, lines 39-58 of '905).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the teaching of Yasuda or Miyajima with the teachings of Yamauchi. One of ordinary skill in the art would have been motivated to combine these references because Yamauchi teaches an expanded programmable machine controller which can independently carry out debugging, operations, and the like, while not connected to the main body programmable machine controller (Col. 1, lines 7-14 of '905).

10. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,578,913 to Yasuda or U.S. Pat. No. 5,298,006 to Miyajima in view of U.S. Pat. No. 6,088,624 to Khan or U.S. Pat. No. 5,640,559 to Silberbauer, as applied to claims 1-2 above, and further in view of U.S. Pat. No. 5,237,665 to Seki. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,578,913 to Yasuda or U.S. Pat. No. 5,298,006 to Miyajima, as applied to claim 9 above, and further in view of U.S. Pat. No. 5,237,665 to Seki.

Referring to claims 5-8 and 11-12, Miyajima teaches a machine program editing (Col. 2, line 64 – Col. 3, line 4 of '006).

Referring to claims 5-8 and 11-12, Yasuda, Miyajima, Khan and Silberbauer teach all the limitations set forth above, however, fail to teach a processor reads only an input/output unit or input/output units to be edited from a storage device or medium through an interface, wherein said processor reads only an input/output unit to be edited and modifies a program block and an effective data length included in the read input/output unit, wherein said processor deletes an

input/output unit by changing rear input/output unit data of a preceding input/output unit designated by front input/output unit data of the input/output unit to be deleted to rear input/output unit data of the input/output unit to be deleted, and changing front input/output unit data of a succeeding input/output unit designated by rear input/output data of the input/output unit to be deleted to the front input/output data of the input/output unit to be deleted, wherein said processor adds a new input/output unit including program block data and additional information and changes rear input/output unit data of a preceding input/output unit designated by front input/output data of the input/output unit to be added to data specifying the input/output unit to be added, and changes front input/output unit data of an input/output unit designated by the rear input/output data of a succeeding input/output unit to be added to data specifying the input/output unit to be added.

However, referring to claim 5, Seki teaches analogous art, wherein a processor reads only an input/output unit or input/output units to be edited from a storage device or medium through an interface (Col. 4, lines 25-43 of '665). Referring to claim 6, Seki teaches said processor reads only an input/output unit to be edited and modifies a program block and an effective data length included in the read input/output unit (Abstract of '665). Referring to claims 7 and 11, Seki teaches said processor deletes an input/output unit by changing rear input/output unit data of a preceding input/output unit designated by front input/output unit data of the input/output unit to be deleted to rear input/output unit data of the input/output unit to be deleted, and changing front input/output unit data of an input/output unit designated by rear input/output data of a succeeding input/output unit to be deleted to the front input/output data of the input/output unit to be deleted (Col. 1, lines 15-29 of '665). Referring to claims 8 and 12, Seki teaches said processor adds a

new input/output unit including program block data and additional information and changes rear input/output unit data of a preceding input/output unit designated by front input/output data of the input/output unit to be added to data specifying the input/output unit to be added, and changes front input/output unit data of an input/output unit designated by the rear input/output data of a succeeding input/output unit to be added to data specifying the input/output unit to be added (Col. 1, lines 15-29 of '665).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the teaching of Yasuda or Miyajima with the teachings of Seki. One of ordinary skill in the art would have been motivated to combine these references because Seki teaches a method of outputting an entered NC program upon subjecting the NC program to predetermined editing processing (Col. 1, lines 15-29 of '665). Furthermore, Seki teaches an NC program output method that can have any starting character string and can be outputted by a simple operation (Col. 2, lines 3-17 of '665).

Response to Arguments

Applicant's arguments filed September 15th 2004 have been fully considered but they are not persuasive.

11. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., claimed features that refer to a prior or succeeding input/output unit) are not recited in the rejected independent claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

12. Applicant argues Miyajima fails to teach that each input/output unit includes additional information associated with the program block data including "front input/output unit data designating an input/output unit immediately preceding each input/output unit in a sequence of the machining program and rear input/output unit data designating an input/output unit following each input/output unit in a sequence of the machining program". The examiner respectfully disagrees.

The independent claim, as such, does not require that the front or rear input/output unit refer to any prior or succeeding input/output unit. In fact, the claims, as such, do not even require that the input/output unit (designated by the front or rear input/output units) be the same or different than the front or rear input/output units that designate the input/output unit. Nor do the claims require that the input/output unit (designated by the first or second input/output units) be the same or different than the first or second input/output units that designate the input/output unit. The claims, as such, do not require that an input/output unit input or output anything, in fact, independent claim 9, does not even require inputting or outputting anything at all.

The examiner respectfully submits that figure 3 of Miyajima and applicant's arguments alone are enough to show that the Miyajima reference does read on the claimed invention in more ways than one. Applicant argues that the commands in figure 3 of the Miyajima reference represent starting and ending macro commands for staring and ending machining programs. The examiner respectfully submits that the code U01 alone is front input/output unit data that designates U01 is an input/output unit immediately preceding each input/output unit in a sequence of the machining program (Fig. 3). The examiner respectfully submits that V01 is a rear input/output unit data designating an input/output unit following each input/output unit in a

sequence of the machining program. As applicant stated, U01 and V01 in figure 3 of Miyajima identify starting and ending macro commands for starting and ending machining programs, and thus, the examiner respectfully submits that figure 3 of Miyajima clearly shows U01 and V01 designate an input/output unit immediately preceding each input/output unit in a sequence of the machining program and an input/output unit following each input/output unit in a sequence of the machining program.

13. Applicant argues that Yasuda fails to teach that each input/output unit includes additional information associated with the program block data including "front input/output unit data designating an input/output unit immediately preceding each input/output unit in a sequence of the machining program and rear input/output unit data designating an input/output unit following each input/output unit in a sequence of the machining program". The examiner respectfully disagrees.

Yasuda clearly teaches each block of an NC program is associated with a pre-execution value and a post-execution value. The examiner respectfully submits that the pre-execution value indicating data required to precede each block and the post-execution value indicating data required to follow each block, wherein the blocks are retrieved on a block-by-block basis and executed in accordance with the pre-execution values and post-execution values for performing the machining process in the order required by the commands (Col. 13, lines 28-37; Col. 12, lines 34-58) is additional information associated with the program block data including front input/output unit data designating an input/output unit immediately preceding each input/output unit in a sequence of the machining program and rear input/output unit data designating an input/output unit following each input/output unit in a sequence of the machining program.

The examiner respectfully submits that the term input/output unit does not place any limitation on what the unit of data is required to be, in fact, the term does not even require inputting or outputting anything at all. The claims, as such, do not require storing anything in any input/output units. In fact, the claims, as such, do not even require a single storage device, the claims only require some type of storage medium. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The examiner respectfully submits that the values and associated blocks correspond to input/output units, and the input/output units are stored. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Furthermore, Yasuda does teach how a RAM works and it is well known in the art how a RAM works. The CPU retrieves the values and associated blocks and acts on these input/output units that are in the RAM in column 6, lines 46-56.

Further still, Yasuda very clearly teaches in the abstract of the invention ***"a pre-execution in-position value and a post-execution in-position value for each of the blocks of the numerical control program are set and stored in ROM"***, wherein the ROM also stores these programs (Col. 4, lines 30-38).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPS

Sean P. Shechtman

October 18, 2004

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100